

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

Expanding Flexible Use in)
Mid-Band Spectrum Between)
3.7 and 24 GHz)

GN Docket No. 17-183

COMMENTS OF MICROCHIP TECHNOLOGY INC.

1. OVERVIEW:

Microchip Technology Inc. is a leading provider of microcontroller and analog semiconductors, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality.

As a company, Microchip Technology (MCHP) has invested in Ultra-Wide Band (UWB) technology consistent with unlicensed operation under FCC PART 15 Subpart C Section 15.250 and/or under Subpart F to enable distance measurement and positioning/localization systems in the automotive market. This technology finds its application in Passive Entry / Passive Start systems in vehicles today.

2. CONSIDERATIONS:

- a. Any action to change the 5.925-7.125 GHz bands for unlicensed devices will compromise the application of existing UWB distance measurement and positioning/localization solution and would create disruptive business conditions for Microchip Technology.
- b. Any new unlicensed users in the 5.925 - 7.125 GHz bands must also be subject to the -41.3 dBm/MHz power limit. Suggested changes, which allow a higher average power level will render inoperative or even worse intermittent, all existing UWB applications currently utilizing that spectrum. This will expose end customers in the automotive market to unsafe and insecure vehicle access & start systems.

3. CONCLUSION:

It is the opinion of MCHP that the Commission take no action on any further allocations in the 5.925 - 7.125 GHz bands for unlicensed devices.

Submitted by,

Microchip Technology

NOI Mid-Band

Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz - GN Docket No. 17-183

Excerpts from other contrary comments:

- [NXP – 11/1/2017]
- [NPR – 11/2/2017]
- [3DB – 11/10/2017]
 - Given the current usage of the band 5.925 – 7.125 GHz together with the stringent protection criteria required to protect licensees, using U-NII systems with higher power levels than -41.3 dBm/MHz will not be able to ensure protection of licensed (safety critical or other) and also currently allowed unlicensed users.
 - In addition, such allocation will fully disable currently operating unlicensed wideband devices (> 50 MHz) complying with Part F 15.250 and ultra-wide band devices complying to Part F 15.501. Given all previous studies already performed on this topic, 3db requests that the Commission to take no action on any further allocations in the 5.925 - 7.125 GHz bands for unlicensed devices.
 - Extensive compatibility studies were performed for wideband devices (> 50 MHz) over the past years [Refer to UWB studies from ITU.R. 800 pages]. These studies show that wideband systems (> 50 MHz) can only safely co-exist with licensed services (safety critical or not), if they follow very low power levels